

#### IV.—PRECIPITATION.

(1.) *In General*.—By the isohyetal lines on the accompanying chart, it will be seen that the rain-fall during May has been distributed in a manner remarkably complementary to that of the preceding one, a great deficiency being reported from the Mississippi Valley and the entire Northern and Western sections, while a slight excess has prevailed in the South and East Atlantic States.

(2.) *Special Droughts*.—The long succession of 26 rainless days in some portions of the South Atlantic States has given rise to some complaints from limited regions in North Carolina, notwithstanding the large quantity of rain that has fallen on the coast. In the Tennessee and Ohio Valleys, Iowa, Indiana, Illinois and Minnesota, the month has been remarkably dry.

(3.) *Cloudy Days*.—The number of days entirely cloudy, as reported from the Signal Stations averages as follows:

5 on the Gulf Coast.	5 in the Ohio Valley.
7 on the South Atlantic Coast.	5 in the Upper Mississippi Valley.
8 on the Middle Atlantic Coast.	8 in the Lower Missouri Valley.
12 on the East Atlantic Coast.	7 in the Lake Region.
5 in the Lower Mississippi Valley.	

(4.) *Rainy Days*.—The number of days in which rain fell, as reported from the Signal Service Stations only, is as follows:

3 on the Gulf Coast.	6 on the East Atlantic Coast.
10 on the South Atlantic Coast.	3 in the Lower Mississippi Valley.
8 on the Middle Atlantic Coast.	7 in the Ohio Valley.
8 in the Upper Mississippi Valley.	9 in the Lower Missouri Valley.
10 in the Lake region.	8 over the Blue Ridge and Alleghanies.

(5.) *Special Rains*.—Remarkably heavy rain-falls occurred—

On the 27th at Galveston.	On the 25th at Sugar Island, Mich.
On the 11th at Clarksville, Texas.	On the 20th at Brownsville, Penn.
On the 25th at Brookhaven, Miss.	

Severe hail-storms appear to have been unusually frequent. The most instructive report on the subject comes from the summit of Pike's Peak, where, on the 14th, large balls of hail fell, composed of soft white snow, without any nucleus. Remarkably large hail is reported from Pennsylvania on the 20th, and from Mississippi on the 25th.

#### V.—HUMIDITY.

In the following table a synoptical view is given of the average per cent. of relative humidity for the several sections of the country:

For the Texas coast, 72; for the New Jersey coast, 74; for the South Atlantic coast, 68; for the interior of the Middle Atlantic States, 62; for the New England coast, 65; for the southern shores of the Lower Lake region, 62; for the Upper Lake region, 65; for the lower Mississippi valley, 60; for the Ohio and Tennessee valleys, 56; for the upper Mississippi valley, 56; for the lower Missouri valley, 56; for the extreme Northwest, 62; for Cheyenne and Denver, 42; for Salt Lake City and Colorado Springs, 40; for Santa Fe, 23; for summit of Pike's Peak,\* 69; for summit of Mount Washington,\* 86.

\* These figures have not been corrected for the altitude of these stations, which respectively are 14,216 and 6,285.

Reports from the interior of Virginia, from Wisconsin, Iowa and Indiana, state that in its relation to agriculture the month has been very dry and hot, but that cool nights and heavy dews have prevailed.

## VI.—THE WINDS.

(1.) *In general*.—The winds most frequently observed are shown by the arrows on the accompanying chart, from which it is evident that southeasterly winds predominated on the Gulf and South Atlantic coasts, but southerly winds in the valley of the Mississippi river and its tributaries. Westerly winds have predominated in New England, and west to northwest winds over the Lake region. Northwest winds have prevailed at the summits of Mt. Washington and Pike's Peak.

(2.) *Strong winds*.—The maxima of hourly velocity of winds recorded at each Signal station, without regard to the direction or the time of day, are as follows: Mt. Washington, 88 miles; Pike's Peak, 60 miles; St. Paul, 50 miles; Kcokuk, Omaha, Denver, Indianola and New York, 48 miles; Breckenridge, Duluth, Fort Sully, Santa Fé, Philadelphia, Toledo, Squan Beach and Long Branch, 45 miles.

In general the maximum hourly velocity has been least throughout the Atlantic and Gulf States, and greatest in the Northwest, where numerous violent local wind-storms have occurred.

The dates on which strong winds were most generally observed were—May 1st, in the Western Territories and Northwest; May 8th, in the Western Territories and Northwest; May 29th, in the Western Territories and Northwest; May 25th, in the Lake region, Middle and Eastern States; May 11th, on the Middle Atlantic coast.

## VII.—VERIFICATION OF PREDICTIONS.

(1.) *Probabilities* —The critical comparison between the separate items of the published tri-daily probabilities and the subsequent weather reports, shows that on the average, during the month, 84½ per cent. of the predictions have been well verified.

## VIII.—RIVERS AND NAVIGATION.

(1.) *Opening of Harbors, &c.*—The last traces of ice in harbors and lakes are reported at Traverse City, Michigan, on the 3d; at Mt. Desert, Maine, on the 6th; at Buffalo and Duluth on the 9th. The Erie Canal was opened on the 5th. An unusually high tide is reported at Indianola, Texas, on the 29th. Navigation is reported as beginning at Duluth on the 4th, and Traverse City on the 7th.

(2.) *Heights of Rivers*.—The general condition of the rivers will be found from the accompanying table, which gives the dates of the maximum and minimum heights of water: